I CLAIM:

1. A process is provided for selecting a wheat plant which exhibits genetically-controlled herbicide resistance that is not attributable to genetic engineering comprising:

(a) soaking mature wheat seeds that are not genetically engineered for herbicide resistance in a liquid comprising glyphosate herbicide for a period of time sufficient for the glyphosate herbicide to reach the embryos of the wheat seeds,

(b) planting the wheat seeds following the soaking of step (a) in a growing medium and producing at least one wheat plant, and

(c) selecting a wheat plant from step (b) or from a subsequent generation that is produced following self-pollination which exhibits genetically-controlled glyphosate herbicide resistance that is not attributable to a foreign gene for herbicide resistance introduced by genetic engineering.

2. The process according to Claim 1 wherein said glyphosate herbicide in step (a) is provided in an aqueous solution in a concentration of approximately 1.5 to 6 percent by weight.

3. A process according to Claim 1 wherein said glyphosate herbicide in step (a) is provided in an aqueous solution in a concentration of approximately 2 percent by weight.

4. The process according to Claim 1 wherein said soaking of step (a) has a duration of at least 6 hours.

5. A process according to Claim 1 wherein in step (b) said liquid comprising said glyphosate herbicide additionally is added to said growing medium.

6. A process according to Claim 1 wherein said wheat plant that is selected in step (c) survives when sprayed with a liquid comprising said glyphosate herbicide in a concentration that commonly would kill a wheat plant.

7. A process according to Claim 1 wherein said mature wheat seeds that are soaked in said glyphosate herbicide of step (a) are derived from the cross of the 'WA7824' and 'Zeke' wheat varieties.

8. A *Triticum aestivium* plant that exhibits genetically-controlled glyphosate herbicide resistance that was selected in step (c) of Claim 1.

9. A *Triticum aestivium* seed which upon germination is capable of forming a wheat plant that exhibits genetically-controlled glyphosate herbicide resistance that was formed on the selected wheat plant of step (c) of Claim 1.

10. A *Triticum aestivium* plant which exhibits genetically-controlled glyphosate herbicide resistance that is attributable to combination the $ng^{w1}ng^{w1}$ gene pair obtainable from the 'WA7824' wheat variety and the $ng^{w2}ng^{w2}$ gene pair obtainable from the 'Zeke' wheat variety.

11. A *Triticum aestivium* seed which upon germination is capable of forming a wheat plant that exhibits genetically-controlled glyphosate herbicide resistance attributable to a combined presence of the $ng^{w1}ng^{w1}$ gene pair obtainable from the 'WA7824' wheat variety and the $ng^{w2}ng^{w2}$ gene pair obtainable from the 'Zeke' wheat variety.

12. A *Triticum aestivium* plant which exhibits genetically-controlled glyphosate herbicide resistance that is attributable to the combined presence of the $ng^{w1}ng^{w1}$ gene pair and the $ng^{w2}ng^{w2}$ gene pair obtainable from 'W2-1' wheat having ATCC Accession No. _____.

13. A *Triticum aestivium* plant which exhibits genetically-controlled glyphosate herbicide resistance that is attributable to the combined presence of the $ng^{w1}ng^{w1}$ gene pair and the $ng^{w2}ng^{w2}$ gene pair obtainable from 'W2-4' wheat having ATCC Accession No. _____.

14. A *Triticum aestivium* seed which upon germination is capable of forming a wheat plant that exhibits genetically-controlled glyphosate herbicide resistance that is attributable to the combined presence of the $ng^{w1}ng^{w1}$ gene pair and the $ng^{w2}ng^{w2}$ gene pair obtainable from 'W2-1' wheat having ATCC Accession No. _____.

15. A *Triticum aestivium* seed which upon germination is capable of forming a wheat plant that exhibits genetically-controlled glyphosate herbicide resistance that is attributable to the combined presence of the $ng^{w1}ng^{w1}$ gene pair and the $ng^{w2}ng^{w2}$ gene pair obtainable from 'W2-4' wheat having ATCC Accession No. _____.

16. An isolated nucleic acid encoding for a protein which when expressed in a *Triticum aestivium* plant causes glyphosate herbicide resistance that is naturally-occurring in wheat wherein said isolated nucleic acid was derived from the wheat plant of step (c) of Claim 1.

17. An isolated nucleic acid which when expressed in a *Triticum aestivium* plant causes resistance to glyphosate herbicide comprising the combined presence of $ng^{w1}ng^{w1}$ gene pair obtainable from the 'WA7824' wheat variety and the $ng^{w2}ng^{w2}$ gene pair obtainable from the 'Zeke' variety.

18. An isolated nucleic acid comprising the combined presence of $ng^{w1}ng^{w1}$ gene pair and the $ng^{w2}ng^{w2}$ gene pair obtainable from 'W2-1' wheat having ATCC Accession No. _____ wherein said nucleic acid when expressed in *Triticum aestivium* causes said wheat plant to be glyphosate herbicide resistant.

19. An isolated nucleic acid comprising the combined presence of $ng^{w1}ng^{w1}$ gene pair and the $ng^{w2}ng^{w2}$ gene pair obtainable from 'W2-4' wheat having ATCC Accession No. _____ wherein said nucleic acid when expressed in *Triticum aestivium* causes said wheat plant to be glyphosate herbicide resistant.

20. A DNA construct comprising the isolated nucleic acid of Claim 16, the nucleic acid being operatively linked to plant gene expression control sequences.

21. A DNA construct comprising the isolated nucleic acid of Claim 17, the nucleic acid being operatively linked to plant gene expression control sequences.

22. A DNA construct comprising the isolated nucleic acid of Claim 18, the nucleic acid being operatively linked to plant gene expression control sequences.

23. A DNA construct comprising the isolated nucleic acid of Claim 19, the nucleic acid being operatively linked to plant gene expression control sequences.

24. A vector comprising the isolated nucleic acid of Claim 16.

25. A vector comprising the isolated nucleic acid of Claim 17.

26. A vector comprising the isolated nucleic acid of Claim 18.

27. A vector comprising the isolated nucleic acid of Claim 19.

28. A plant cell comprising the vector of Claim 24.

29. A plant cell comprising the vector of Claim 25.

30. A plant cell comprising the vector of Claim 26.

31. A plant cell comprising the vector of Claim 27.

32. A method to control weeds in a field of wheat plants according to Claim 8 wherein a glyphosate herbicide is applied to the field at rate and amount suitable for effective weed control while maintaining the viability of the wheat plants.